

# The Association Between Spirituality and Depression in Parents Caring for Children with Developmental Disabilities

Gallagher, Stephen; Phillips, Anna C; Lee, Helen; Carroll, Douglas

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Running head: SPIRITUALITY AND DEPRESSION

**The association between spirituality and depression in parents caring for children with developmental disabilities: social support and/or last resort**

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## **Abstract**

**Aims:** Associations between spirituality and depression were examined in parents of children with developmental disabilities using both quantitative and qualitative methodology. **Results:** Spirituality was positively associated with depression, whereas social support was negatively related; parents with higher spiritual beliefs and lower levels of support had higher depression scores. Themes emerging from interviews were spiritual/religious coping as a way of dealing with difficulty, as a last resort, and as a form of release from their situation. **Conclusion:** Associations between spirituality and depression in these parents are more complex than previously thought.

**Key words:** Coping; Depression; Social support; Spirituality.

## **Introduction**

Parents of children with developmental disabilities report more psychological distress than parents of children without disabilities (Dunn, Burbine, Bowers, & Tantleff-Dunn, 2001; Gallagher & Hannigan, 2014; Gallagher, Phillips, Oliver, & Carroll, 2008; Glidden & Schoolcraft, 2003). Although some families adapt successfully to the demands of raising a child with a developmental disability, others do not. According to McCubbin and Patterson (1983), successful adaptation in these families is partly driven by access to resources and coping strategies. For example, social support has generally been found to be inversely related to depression and anxiety in such parents (Gray & Holden, 1992; Weiss, 2002; White & Hastings, 2004). Moreover, parents who use escape-avoidant strategies to cope report more psychological distress than parents who use positive reframing strategies (Dunn et al., 2001; Essex, Seltzer, & Krauss, 1999; Hastings & Johnson, 2001).

Comparative studies of cultural/ethnic contexts of families with a child who has a disability often cite religion and spirituality as a salient coping strategy in family adjustment (Duvdevany & Vudinsky, 2005; Khamis, 2007; Skinner, Correa, Skinner, & Bailey, 2001; Tarakeshwar & Pargament, 2001). Indeed, religion in personal life and support from church were both related to positive adjustment in American families caring for children with developmental disabilities (Rogers-Dulan, 1998). Spirituality plays a key role in helping parents to cope with the stresses associated with caring for a seriously ill child (Allen & Marshall, 2010; Feudtner, Haney, & Dimmers, 2003; Schneider & Mannell, 2006). However, not all studies report positive findings. In a UK sample, religious coping was associated with greater depression in parents of children with autism (Hastings et al., 2005). Such discrepancies might be attributed to cultural variation; nevertheless it does suggest that further research on the relationship between religiosity and distress in this context is needed. Further, with evidence indicating that both depression (Dyson, 1993; Glidden & Schoolcraft, 2003) and religious coping (Gray, 2006) persist over time in these parents, such studies are clearly warranted.

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Social support has long been regarded to mitigate distress (Bailey, Wolfe, & Wolfe, 1994; Dunn et al., 2001) and considerable research has been directed at its role in parents of children with developmental disabilities (Gallagher & Whiteley, 2012). Symptoms of depression were found to be much lower in parents of children of developmental disabilities when they reported better social support (Gray & Holden, 1992; Hare, Pratt, Burton, Bromley, & Emerson, 2004; McCallion, Janicki, & Kolomer, 2004; Weiss, 2002). Further, social support has also been found to enhance coping in parents of children with developmental disabilities (Luther, Canham & Young-Cureton, 2005; Schilling, Gilchrist, & Schinke, 1984). In fact, supportive social relationships are important for most forms of coping (Wrubel, Benner, & Lazarus, 1981). For instance, social support can attenuate an individual's perception of a problem and can compliment personal coping. In studies of religious coping, both social support and intrinsic religiosity had a combined effect in explaining 27% of the variance in the prediction of psychological distress in young adults (Salsman, Brown, Brechting, & Carlson, 2005), implying that both variables are important for psychological health. In the context of caregiving, the church has played an important role in coping with the social and psychological stressors experienced by young families caring for children with special needs (McAdoo, 1996). Similarly, successful coping was associated with a number of social contacts and support received from religious faith (Rabins, Fitting, Eastham, & Zabora, 1990). In parents of children with developmental disabilities, coping strategies have been found to change over time (Gray, 2006). Religious coping, however, has been reported to be the dominant strategy if parents become more socially withdrawn and isolated (Gray, 2006). This suggests that social isolation may be a key determinant of religious coping. It is also evident from these studies that social support, religion and depression are not only interrelated, but that religious coping could be a pathway through which social support influences psychological distress in these parental caregivers, with caregiver relying on religious or spiritual beliefs during times of social isolation.

Even though the vast majority of studies report a beneficial effect of religion on health (Hummer, Rogers, Nam, & Ellison, 1999; Koenig, McCullough, & Larson, 2001; McCullough, Larson, Koenig, & Lerner, 1999), this research has been the subject of

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considerable controversy (Sloan, Bagiella, & Powell, 1999). For example, religious involvement is strongly correlated with health-related factors, such as functional status, lifestyle and social support, which may confound associations between religious observance and beliefs and health (Sloan & Ramakrishnan, 2006). Further, although religiosity is a widespread characteristic, it is often poorly measured in public health research (McCullough et al., 1999; Thune-Boyle, Stygall, Keshtgar, & Newman, 2006) and little account is taken of spiritual beliefs that are not tied to personal or public religious practice (King & Dein, 1998). In addition, some have argued that it is important to distinguish the social factors associated with religious ceremony from the more personal spiritual belief itself (Chatters, Levin, & Taylor, 1992). Further, the percentage of North Americans professing a belief in God or a higher power is far greater than those who attend church regularly (95% versus 40%) (Gallup & Lindsay, 1999). Population surveys in the United States have found a rise in spiritual concern (Gallup & Jones, 2000), while those in the United Kingdom show a decline in religious affiliation (Crockett & Voas, 2006). Taken together, these studies suggest that it may be more meaningful to measure the strength of spiritual beliefs rather than assessing denomination or the frequency of observance. Moreover, unlike previous religious and spirituality questionnaires the Beliefs and Values Scale (King et al., 2006) is non-denominational; it also minimises the likelihood of confounding spirituality with church attendance and social support, which make it more suitable in this context.

The aims of the present study were to examine interrelationships among spirituality as a coping strategy, social support, and psychological adjustment among parents caring for children with developmental disabilities. It was hypothesized: first, that parents of children with developmental disabilities with stronger spiritual beliefs would exhibit fewer symptoms of depression; second, that those with better social support would also show less depressive symptomology; third, that social support would be negatively related to spirituality; finally, any relationship between social support and depression would be mediated by spirituality.

## **Methods**

### *Participants and procedure*

Thirty-two parents caring for children with developmental disabilities participated in the study. Parents were recruited from syndrome-specific family support groups and by advertising in syndrome association newsletters and through word of mouth. Inclusion criteria for these parents were: caring for at least one child with Downs, Autism, Cornelia de Lange, or Smith-Magenis syndromes; the child with the developmental disability had to be aged between 3 and 19 years and cared for at home during the school term. The majority of parents reported caring for a child with Autism (66%) - half of these had Aspergers; the remainder were parents of a child with Down syndrome (22%) and children with other syndromes (12%). One hundred and one parents contacted us about participating and 32 agreed to participate. The purpose of the study was explained in detail and participants were given a pack of questionnaires and had the option of completing the questionnaires at the University or at home, returning them in a prepaid envelope. Those who did wish to participate almost invariably cited time pressure and family commitments as the main reasons for non-participation.

### *Questionnaires*

#### **Depression**

Parental psychological morbidity was determined from the Hospital Anxiety and Depression Scale (HADS) (Bjelland, Dahl, Haug, & Neckelmann) (Zigmond & Snaith, 1983), a well-recognised and respected assessment tool. The scale contains 14 items, scored from 0, not present, to 3, considerable, with seven assessing largely the anhedonic rather the somatic aspects of depression (e.g., 'I have lost interest in my appearance') and seven assessing anxiety (e.g., 'I feel tense or wound up'). The item scores are summed, giving sub-scale scores for depression and anxiety from zero to 21. However, because depression and anxiety are highly inter-related only the depression subscale was used for our analyses. The HADS has good concurrent validity (Bramley, Easton, Morley, & Snaith, 1988; Herrmann, 1997), performs well as a psychiatric screening device (Bjelland et al., 2002; Herrmann, 1997), and boasts good psychometric properties; for example, a Cronbach's  $\alpha$ , an index of internal reliability, of .90 for the depression items has been

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reported (Moorey et al., 1991) with test-retest reliability coefficients as high as .85 for depression (Herrmann, 1997). For the present sample, Cronbach's  $\alpha$  was .86 for the depression subscale.

### **Spirituality**

The 20-item Beliefs and Values Scale (King et al., 2006) was used to measure parental spirituality. Examples of items include 'I believe in life after death' and 'I believe there is a heaven' with scores ranging from 1, strongly disagree, to 5, strongly agree. Higher scores indicate greater spiritual beliefs. Unlike previous religious and spirituality questionnaires, this measure is non-denominational; it also minimizes the likelihood of confounding spirituality with church attendance and social support. The scale had good criterion validity with the Intrinsic Religious Motivation Scale (Hoge, 1972) a high internal consistency  $\alpha = .93$ , acceptable test-retest reliability, with no item having a weighted kappa statistic  $< 0.5$ . In the present study the Cronbach's  $\alpha$  was .94.

### **Social support**

Social support was assessed by the 12-item Support Functions Scale (Dunst, Trivette, & Deal, 1988). Parents rate the availability of support on a 5-point Likert scale ranging from 1, never, to 5, quite often. Items included 'someone to help take care of my child' and 'someone to talk to about things that worry me'. Higher scores indicate greater availability of social support. Internal consistency ( $\alpha = .86$ ) has been reported to be high (White & Hasting, 2005) and in the present sample  $\alpha = .83$ .

### **Statistical analyses**

Using the conventional HADS cut-off score of  $\geq 8$  to signify possible clinical depression, likely depression cases and non-cases were compared on demographic, child care characteristics, and social support, spirituality, and affect using analysis of variance and  $\chi^2$ . Subsequent, analyses were by regression, mainly testing hierarchical models using continuous HADS depression scores. In these regression analyses, potential



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confounding variables were always entered at step 1, including work outside the home.

Slight variations in degrees of freedom reflect occasional missing data for some variables.

## Results

### *Descriptive characteristics of parents with and without possible clinical depression*

As the parents of Down syndrome children did not differ from the other parents in terms of the social support, spirituality or HADS depression scores, the study treated all parents as a uniform group. The socio-demographic and summary childcare characteristics including social support, spirituality and affect scores of the parents with and without probable depression are presented in Table 1. Save for spirituality, social support and HADS scores, there were few group differences. However, there were more cases of depression among parents who were not currently employed outside the home.

[Insert Table 1 about here]

### *Spirituality, social support, and symptoms of depression*

In linear regression analysis, a broadly similar picture emerged; spirituality was positively associated with HADS depression scores,  $\beta = .56$ ,  $t = 3.58$ ,  $p < .001$ ,  $R^2 = .32$ , whereas social support was negatively related,  $\beta = -.46$ ,  $t = 2.88$ ,  $p = .007$ ,  $R^2 = .22$ . Social support was negatively associated with spirituality,  $\beta = -.43$ ,  $t = 2.57$ ,  $p = .016$ ,  $R^2 = .219$ . In analysis, where both independent variables were entered simultaneously, only spirituality was significantly associated with depressive symptomatology,  $\beta = .47$ ,  $t = 2.72$ ,  $p = .01$ ,  $R^2 = .35$ . After adjusting for work outside the home, greater spirituality was still linked to higher depression scores,  $\beta = .46$ ,  $t = 2.89$ ,  $p = .007$ ,  $\Delta R^2 = .19$ . Finally, in hierarchical linear regression analysis, in which social support was entered at step 1 and spirituality at step 2, the  $\beta$  for social support was attenuated from  $-.46$  at step 1 to  $-.21$  at step 2, and was no longer significant in the equation,  $p = .23$ . Thus, as all these

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variables were correlated and met the assumptions of mediation outlined by Baron and Kenny (1986). Accordingly, using the Goodman test (Goodman, 1960) evidence was found for mediation,  $z = -1.94$ ,  $p = .05$ . Thus, it would seem that spirituality was not only associated with depressive symptomatology in these parents, but it also appeared to account for the relationship between social support and depression.

## **Discussion**

The present quantitative study confirmed the negative association between social support and depression in parents caring for a child with developmental disabilities (Dunn et al., 2001; Yirmiya & Shaked, 2005). Further, spirituality proved to be a mediator of the social support-depression association; parents who reported less social support had greater spiritual beliefs. However, contrary to our expectations, spirituality was positively related to depression; parents who held stronger spiritual beliefs reported more depressive symptoms. This is at odds with the general consensus in the literature where spirituality is generally associated with a reduction in depressive symptoms in these caring parents (Duvdevany & Vudinsky, 2005; Skinner et al., 2001; Tarakeshwar & Pargament, 2001). A number of explanations can be postulated for such discrepancies, including cultural differences and measurement issues. Nonetheless, as the quantitative study was cross-sectional it is impossible to determine causality and its direction. Accordingly, we undertook a qualitative study on a small sample of these parents to afford greater insight into this phenomenon and to understand better why spirituality and religious coping are more likely to be employed by these parents when dealing with the stress of caring.

## **Qualitative Study**

### *Participants and interviews*

Five parents from the previous sample who met the selection criteria, possible depression on the HADS and relatively high scores on the spirituality scale, were invited to take part in this qualitative study. All five agreed to take part; these were all women,

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two identified themselves as being Roman Catholics, one Christian, one Muslim and one had mixed religious heritage (Muslim and Christian) but no church affiliation. These were caring for children with Autism (three), Down syndrome (one) and Trisomy 21 (one) which is similar reflection of our quantitative sample. Identifying features have been anonymised and pseudonyms used throughout. Interviews were conducted by the principal investigator and took place in a quiet room at the University. They lasted approximately one hour. Interviews were semi-structured in nature and the questions tried to elucidate the benefit and/or meaning that parents attached to their spirituality/religious beliefs in the context of support and coping. Examples of the questions posed were: “Do you find that having these beliefs in God has helped you in any way in your current situation?”; “In what kind of situations do you use your spiritual beliefs most?”; “Do you feel that others are more supportive to you because of your spiritual beliefs?”; The interviews were tape-recorded and transcribed verbatim.

### *Analysis*

The qualitative analysis aims to identify shared meanings about spiritual/religious beliefs and practice in the context of support and coping. Transcripts were analyzed using thematic analysis (Braun & Clarke, 2006) which is a rigorous, systematic, data-driven form of analysis. A similar method of analysis has been used by Skinner et al (2001) to investigate the role of spirituality in the lives of parents of children with developmental delays. The five interview transcripts were analyzed by noting relevant units of meaning and creating initial codes, identifying emergent categories to compile a preliminary list of themes.

As our purpose here was to examine the views of within the sample and not to provide an in-depth account of the role of spirituality for health in these parents we did apply saturation or member checking criteria in the analytic strategy. Thus, following the initial coding and generating themes a preliminary list of 8 themes in related clusters were generated (Braun Clarke, 2006). This resulted in a complete, hierarchically organized summary list of 3 final themes. In order to provide a check on the validity of the analysis and interpretation of participants' accounts, the data set was subjected to further scrutiny by re-reading the transcript and reassessing the emergent themes. Moreover,

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triangulation of these themes was conducted by the authors (HL, AP, and DC)

independently of the first author (SG). Discrepancies in identification of themes were addressed by careful re-reading and discussing the initial codes until consensus was reached. This ensured inter-rater reliability and consistency of emergent themes.

## **Results:**

The following theme categories were identified in the narratives and provided a greater understanding of the role that spirituality played in the lives of these parents.

### **Support dichotomy**

Initial reading of the transcripts revealed that spirituality was mainly used as a source of support. For the most part, parents talked about their spiritual beliefs helping them deal and cope with difficult and challenging situations. Without these beliefs parents said that they would have struggled and would not have coped as well with the demands of caregiving for their children when they were feeling very low.

*“Definitely without a doubt, I don’t know what, where I would be,[...]I don’t know how I would have coped without believing that there was somebody there, which was going to pull me through certain situations.”*

*“Yeah, and even though I’ve been very flat at times I think just knowing God is there, I’m not by myself I have got God there.”*

However, a support-spirituality dichotomy was also present. In contrast, to spiritual beliefs buffering against distress, some parents often felt frustrated by God. Again this was most evident when they were trying to cope with stressful events. During these times parents often prayed for some divine intervention to help them get through situations. The extracts below highlight this dichotomy.

*“I get cross with God sometimes and I kind of, even though um, when ‘David’ was diagnosed and everything I never asked why me um.. but certain situations like when he’s shouting and it’s got through to you and it’s kind of you know getting to your kids as well you, can think God you know how much more of this can you keep going you know surely you’re going to put an end to it sometime.”*

On the one hand parents felt supported in that they said they would not have coped without their beliefs; however, when they felt that their prayers/cries for help went unanswered and their expectations were not met it often left them feeling frustrated. This frustration and upset was most evident during acute challenging events when they found it difficult to deal with the challenging behaviors of their children where they felt quite helpless.

### **Last resort**

A related theme was spirituality as a last resort. These beliefs were frequently used as a coping strategy especially when they felt unsupported and isolated and completely worn out and exhausted or at the end of their tether with no one but God to call upon for help. The quotes below demonstrate this:

*“One night ‘David’ was on the floor by the side of his bed when he was little, I had to hold him down because he was hitting his head on the wall and I just used to have to pray to God because it’s the only way through um that difficult situation”[...] “No, no one else was there, no um [...] and I needed to rely on someone and it was God, yeah.”*

*“Yeah I’d, I’d say probably since ‘Rachael’ was born I do tend to try and rely on (Spiritual beliefs/God) more because you, you feel constantly let down by the system or whatever you have to try and find your own um ways*

*of coping and you know there's only so long you can keep putting your batteries on recharge"*

The above extracts highlight the distress experienced by these parents and emphasise the situations where spiritual beliefs are most frequently employed as a strategy to cope with difficult and challenging situations, especially when they feel that they have no other options left but to turn to God who is always there. As such, due to the lack of available support during crises, calling on their spiritual beliefs seemed to be the 'last resort' for these parents. Further, this avenue is often the only recourse when they feel that their plight falls on deaf ears with no one listening and they are feeling unsupported and let down by the system. These quotes also emphasise how little control parents felt they had.

## **Release**

Spirituality as a source of release from the challenges of daily life was another theme to emerge from the transcripts. Parents often spoke about how their spirituality or church attendance offered them a way of escaping the reality of their situation: often providing immediate respite, but also in the future in their next life. In the here and now, some parents made reference to church attendance not as a place of worship, but as a 'haven' or a place for 'me time'. The extract below illustrates this:

*"sometimes I don't even acknowledge what the gospel is about to be honest with you, or what even the priest is saying, it's just hard to explain, it's just my time to sit somewhere where it's just quiet".*

Other parents believed in an afterlife and this belief was something that sustained them, especially when they felt that this life was a constant struggle. The afterlife was seen as a place where they would not suffer and, instead, be rewarded for all their efforts in this life.

*“This life’s not nice. No for me it’s not definitely not so nice it’s really hard and I think maybe when I pass over it, I might get some reward when I go over for looking after a child like this....”*

The above transcript extracts help to illuminate the distress experienced and the constant struggle faced by parents to cope with the demands of caregiving. Further, some of the parents used spirituality as a form of escapism and or a way of enduring their current suffering which they will hopefully be rewarded for in the afterlife.

## **Discussion**

In parents caring for children with developmental disabilities we found that spirituality was a mediator of the social support-depression association. Here, parents who reported less social support had greater spiritual beliefs. However, not as expected spirituality was positively related to depression; parents who held stronger spiritual beliefs reported more depressive symptoms. This is at odds with the wider literature where spirituality is generally associated with a reduction in depressive symptoms in these caring parents (Duvdevany & Vudinsky, 2005; Skinner et al., 2001; Tarakeshwar & Pargament, 2001). Although a similar pattern has been found in elsewhere, religious coping among parents of children with autism was mainly used when they were low in social support (Gray, 2006). The positive association between spirituality and depressive symptomatology is broadly in line with the results of the one other UK study to investigate religiosity and distress in parents caring for a child with a developmental disability; religious coping was positively associated with depression in parents of children with autism (Hastings et al., 2005). It should be conceded, though, that the majority of research, largely conducted in the USA, suggests that religion and spirituality confer health benefits, including mitigating the effects of depression in these particular parents (Duvdevany & Vudinsky, 2005; Skinner et al., 2001; Tarakeshwar & Pargament, 2001). A number of explanations can be postulated for such discrepancies, including cultural differences and measurement issues. For example, spiritual beliefs would appear

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to a more prevalent in the USA than the UK and to have a different cultural significance. In addition, it is clear that observance and spirituality are not wholly overlapping phenomena.

As the quantitative study was cross-sectional it is impossible to determine causality and its direction. Accordingly, we undertook a qualitative study on a small sample of these parents to afford insight into when and why spiritual and religious coping are more likely to be employed by these parents when dealing with stress. The themes arising from the qualitative interviews of the distressed parents in this study indicate that spirituality was viewed as source of both comfort and frustration. When parents used spirituality as a last resort, they were often left feeling angry and frustrated. The release theme emerged mainly as a response to parents feeling exhausted and in real need of some form of personal respite away from their caregiving role. This is perhaps why the church is often found to play an important role in coping with the social and psychological stressors experienced by young families caring for children with special needs (McAdoo, 1996). Spirituality and religious mechanisms are often a way for them to escape the reality of their situation. The release theme also indicates that the levels of distress being experienced by these parents are such that they actually report looking forward to “passing over” to escape their burden in this life. Some parents believed that they could not have coped without their spiritual beliefs and it was God who often got them through a ‘difficult situation’. However, in contrast, when they perceived that their prayers for help went unanswered by God, disappointment and greater isolation ensued; these disappointments led parents to talk about feelings of frustration which were more evident when they had to deal with child problem behaviours on their own and when they had no one else to turn to for support and had to rely on their spirituality as a last resort. Taken together, the above themes suggest that the association between spirituality and depression is not necessarily linear. Indeed, some population-based studies support this notion and have found that the association between religion and depression can be U-shaped (Schnittker, 2001); people who perceived religion to be either high or low importance to them evidenced more depressive symptomatology compared to those with moderate perceptions.



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Moreover, it is becoming increasingly evident that religious/spiritual coping strategies can be divided into positive (e.g. seeking support from clergy, forgiveness, reappraisal) and negative (e.g. spiritual discontent, pleading for direct intercession, punishing God reappraisal) forms (Pargament, Koenig, & Perez, 2000); positive forms typically relate to more positive outcomes, whereas negative religious coping strategies are generally related to more negative outcomes. The extracts from our participants suggest that these distressed parents are using more negative religious/spiritual coping styles to deal with the stress in their lives. Examples of this include, directly pleading for God's help and feelings of spiritual discontent and frustration with the inability of God to assist them. Moreover, with evidence demonstrating that both depression (Dyson, 1993; Glidden & Schoolcraft, 2003) and religious coping (Gray, 2006) persist over time in parents caring for a child with a developmental disability, alternative forms of coping with stressors should be promoted.

Further, both the quantitative and the qualitative data indicate that such negative spiritual/religious coping is more likely to be used when access to social support is limited or not available. Others have argued that spiritual coping appears to be mostly used in situations of extreme stress that are out of one's control and may operate primarily as a form of emotion-focused coping (Pargament, 1997). This is evident from the qualitative extracts, when parents talked about extreme difficulty in dealing with their child's behavioural disturbances; they were particularly distressed when they could not cope effectively with the situation, and resorted to God or a higher power for intercession. It could be that the lack of supportive social or professional relationships during times of stress impacts on these parents coping strategies which in turn influences their adaption and interpretation of events and ultimately their overall well-being. Indeed, supportive social relationships are important for most forms of coping (Wrubel et al., 1981); social support can attenuate a person's perception of a problem as a problem and can complement personal coping. Thus, it appears that negative religious/spiritual coping styles are more likely to be used by parents of children with development disabilities when they are socially isolated and dealing with acutely stressful situations.

The current study has a number of limitations. First, the sample sizes were small and this limits the extent to which the results can be generalized beyond this group. For example, some procedures of qualitative methodology such as data saturation and member checking were not a feature in this part of the study. However, our purpose here was to add clarity around our quantitative results. Therefore they should be seen as complimentary to the quantitative analyses nonetheless caution is warranted when interpreting the results. Second, the analyses are cross-sectional. Accordingly, the high levels of psychological morbidity observed in parents caring for children with developmental disabilities may be transitory. However, there is evidence that high levels of depression and spiritual coping in this population persist over time (Glidden & Schoolcraft, 2003; Gray, 2006). Third, a failure not to include those scoring high on depression and low on spirituality in the qualitative study is also limitation; thus our results need to be interpreted with caution. Fourth, although steps were taken to ensure the qualitative themes were valid with verification and authors the background and expertise of the researchers can often influence the analytic and interpretative processes. Here we outline the background of the authors: two of the authors are health psychologists (SG/AP), one is a social psychologist (HL) and the DC is an applied psychologist. Both SG and HL have expertise in qualitative techniques and HL is a qualitative specialist while SG uses thematic analysis in in his qualitative publications. AC and DC are quantitative experts. Finally, only women were interviewed, but this is hardly surprising as they predominate as primary caregivers.

In summary, the present data indicate that parents of children with developmental disabilities who reported higher spirituality exhibited more depressive symptomatology and were more likely to reach the threshold for possible caseness. Further, spirituality mediated the association between social support and depressive symptomatology. As a form of coping, spirituality was more likely to be used as a means of seeking escape from their care-giving demands and as a way of dealing with stress. It was used most frequently when parents felt alone and unsupported. It appears to be an integral part of how parents caring for children with developmental disabilities respond to stressful life situations woven into the very nature of their lives.

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Table 1. Demographics and child characteristics, social support, spirituality and mood for parents scoring  $\leq 8$  (not depressed) and  $\geq 8$  (possible depression) on the HADS scale

	$\geq 8$ HADS (n = 19)	$\leq 8$ HADS (n = 12)	Test of difference
Sex (female)	16 (84%)	7 (58%)	$\chi^2(1) = 1.40, p = .24$
Marital status (partnered)	17 (90%)	10 (83%)	$\chi^2(1) = 0.00, p = 1.00$
Ethnicity (caucasian)	16 (84%)	12 (100%)	$\chi^2(1) = 0.68, p = .41$
Occupational status (professional)	7 (38%)	7 (58%)	$\chi^2(1) = 0.64, p = .42$
Currently employed outside the home	11 (58%)	12 (100%)	$\chi^2(1) = 4.79, p = .03$
Mean age (SD) years	43.2 (6.13)	42.3 (5.63)	F (1,29) = 0.40, $p = .69$
Mean age of main care recipient (SD) years	10.8 (3.49)	12.7 (2.87)	F (1,29) = 2.49, $p = .12$
Mean social support score (SD)	28.3 (10.56)	35.9 (6.89)	F (1,29) = 4.78, $p = .03$
Mean spirituality score (SD)	78.3 (16.28)	48.4 (20.33)	F (1,28) = 19.58, $p < .001$
Mean anxiety score (SD)	12.5 (3.51)	7.8 (3.18)	F (1,29) = 14.05, $p < .001$
Mean depression score (SD)	10.9 (2.35)	4.5 (1.73)	F (1,29) = 65.68, $p < .001$